cab

Label printer
MACH4 The Business Class.

Edition 4

Product type overview MACH4

One concept – three designs

B with tear off plate

The label should stick out of the printer for at least 30mm for tearing off.

Printing method	Thermal transfer / Thermal direct		
Print resolution dpi	203	300	600
Print speed up to mm/s	200	200	100
Print width up to mm	104	105.6	105.6

P with tear off plate and dispense function

The label hight when dispending is down to 20 - 200 mm.

Printing method	Thermal transfer / Thermal direct		
Print resolution dpi	203	300	600
Print speed up to mm/s	200	200	100
Print width up to mm	104	105.6	105.6

C with tear off plate and cutter

Labels or continuous material can already be cut at a height of 12 mm.

Printing method	Thermal transfer / Thermal direct		
Print resolution dpi	203	300	600
Print speed up to mm/s	200	200	100
Print width up to mm	104	105.6	105.6

Options

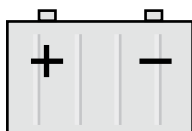### 24 volt battery operation

For the battery operation there is a control PCB with 24 volt battery access built in instead of the power supply unit. Thus the printer can be used in a mobile way. The print speed is thereby limited to 100 mm/s. The battery capacity is sufficient for at least one working day.

RFID Read-Write Unit in preparation

The transfer printers can be additionally equipped with a RFID read and rewrite transponder in Smart-labels with 13.56 MHz.

Primary features

Detailed perfection

■ The future "made by cab": MACH4, the
new label printer which sets new, innovative
benchmarks.

■ It offers all the features of a high class industrial
printer with a wide application range.

■ Labels and ribbons can be inserted from the front.
The print mechanism and the cover are made of
premium materials and are perfectly harmonized
in their form and their functions.

■ Easy and comfortable handling and high reliability
were the requirements during development.
The large display with white backlight offers best
readability.

■ The navigation pad with the additional "Enter"
button simplifies the operation - thereby only the
operated functions are indicated.

■ The centred label path makes adjustments
unnecessary and avoids wrinkling of the ribbon.

■ On the high-tech electronic board all required
interfaces are serially integrated and applicable
for every adapter.

■ **Environmentally sensitive**
Energy-saving
Durable

Technical details

Convincing product advantages

1. Cover with large window

Can be opened widely.
The integrated absorbability mechanism provides smooth closing. The label supply is visible at all times.

2. Media hub

The label roll is placed within the media hub and centred automatically. Materials varying in width can be easily fit within the box.

3. Ribbon retainer

The ribbon is slid onto a ribbon supply hub with spring mounted brackets. It can be centred with a movable flange and a positioning indicator. Inserting the ribbon into the print mechanism is now easy and convenient.

4. Print mechanism

It is opened at the push of a button and offers best access.

5. Printing with 203, 300 or 600 dpi

The printheads can be exchanged easily from 203 to 300 dpi. The printer automatically detects the resolution.

6. Gap sensor

To detect the beginning or end of labels the gap sensor is mounted in the centre of the label path. For multi-track labels the user can switch to another sensor which is shifted 10 mm sideways.

7. Label guidance

With the adjustment knob the user can adjust the width of the printing area. This is to centre the labels.
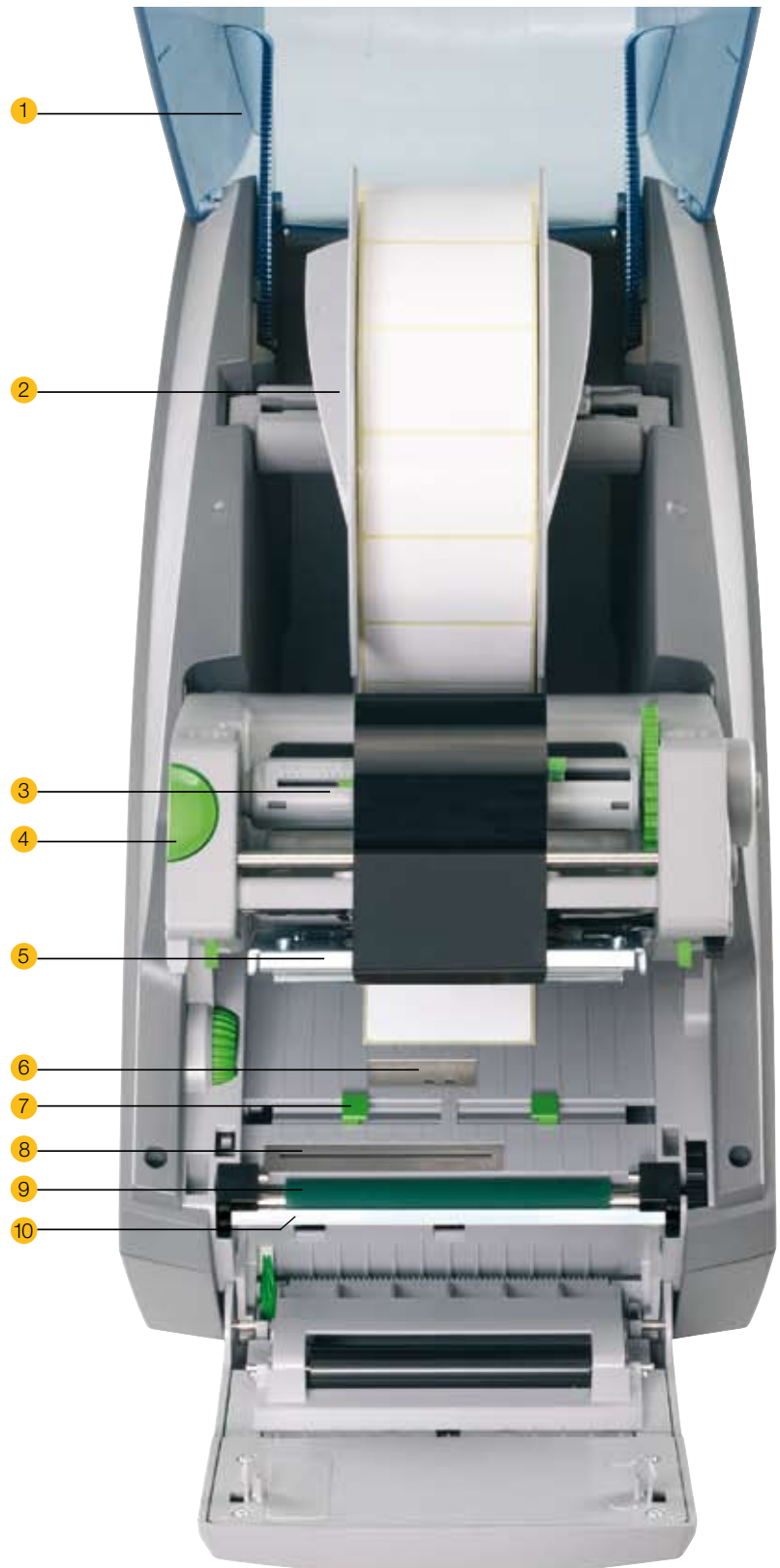
8. Reflex sensor

Start of label, printer's imprint and cut outs can be identified with a adjustable reflex sensor.

9. Drive roller

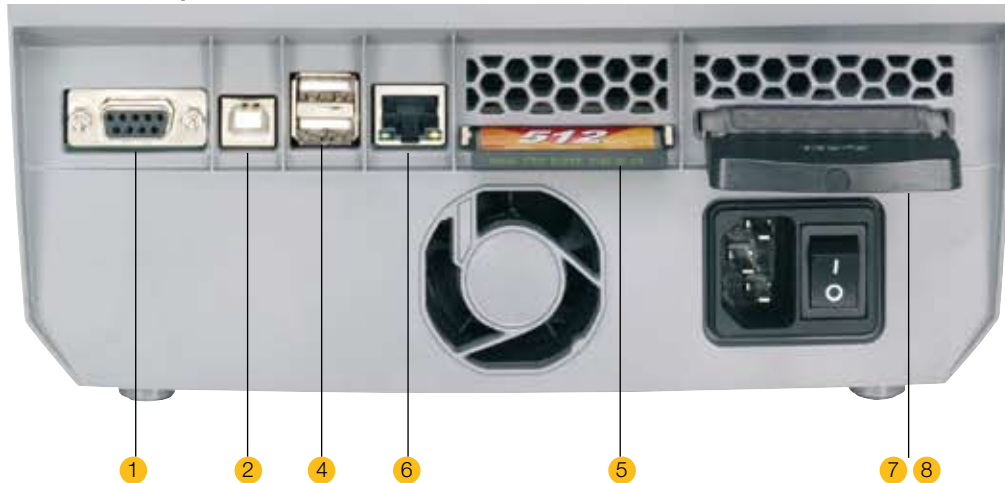The drive roller can be easily removed for cleaning or replacement.

10. Peel-off-plate

The liner is guided down behind the operation panel. The label is peeled off at the peel-off-plate.

All interfaces built in

Back side of printer

■ Standard □ Option

PC/SPS interfaces

■ **1. Serial RS232 C** interface up to 230.400 Baud.

■ **2. USB 2.0 High Speed Slave** interface.

□ **3. Parallel Centronics** acc. IEEE 1284
The data from the Centronics interface are
converted onto the USB Full Speed interface.

Peripherical connection

■ **4.** Two **USB-Master** interfaces to connect keyboard,
scanner or USB flash drive.

■ **5.** Slot for **CompactFlash Type I Card** up to 2 GB.

Network connection

■ **6. Ethernet 10/100 Base T**- interface with TCP/IP Proto-
col. Printing with LPR/LPD, Raw IP or FTP.
IP adress can be set manually or obtained via DHCP.
Status information and set up via internet browser.
FTP for firmware updates and PC-card Type II/Compact-
Flash administration.
Messages can be sent via e-mail or SNMP.
Time and date synchronization through time server.

■ **7.** Slot for **Wireless LAN**-Card
or **PC-Card Type II** (PCMCIA)

□ **8. WLAN-card IEEE 802.11 b/g** for wireless
network connection, dependend on chip set.
IEEE 802.11 b: 11 MBit/s, 2.4 GHz Band
IEEE 802.11 g: 54 MBit/s, 2.4 GHz Band

Stand-Alone operation without PC

Complete labels can be created on a PC with a labelling
software program such as cablabel R2, Codesoft or Easylabel.
It will be saved on a CompactFlash card or USB flash drive in
the printer.

Recall these labels from the printer with an USB keyboard.
Add variable text, databases values and graphics and print
out the requested labels.

Additionally data from scanners, PDA or e.g. scales can be
transmitted.

6 Technical Data

1. Printhead	MACH4		
Printing method	Thermal transfer / Thermal direct		
Print resolution dpi	203	300	600
Print speed up to mm/s	200	200	100
Print width mm	104	105.6	105.6
2. Labels			
Material: Labels, continous rolls or fan-folded	thermal and standard paper, cardboard, textile, plastic foils PE, PP, PVC, PA, PI		
Material thickness mm / weight g/m²	0.055 - 0.8 / 60 - 200		
Media roll: Total diameter up to mm	210		
Core diameter mm	38 - 100		
Winding direction	inside our outside		
Width of carrier or of continuous material mm	25 - 120 / from 0.4 mm Material thickness 5 - 120		
Label width[1] mm	6 - 116		
Label height[1] mm	5 - 1000		
Label height when dispensing[1] mm	20 - 200		
3. Ribbon			
Ink	inside or outside		
Roll diameter up to mm	72		
Core diameter mm	25		
Ribbon length variable up to m	360		
Width up to mm	114		
5. Dimensions printer			
Height x Depth x Width mm	312 x 435 x 240		
Weight kg	6		
6. Label sensor			
gap sensor for label edge, punching mark and end of material	centered or shifted 10 mm to the left		
reflective sensor for label edge, punching or centered printing mark	adjustable 56 mm to the left/ 10 mm to the right		
7. Electronics			
Processor high speed 32 Bit ColdFire/clock frequency MHz	266		
(RAM) MB	64		
(ROM) MB Flash	8		
Slot for memory CompactFlash-card Type I up to 2 GB	■		
Slot for memory card Cardbus / PC-Card Type II	■		
Real time clock, print-ad out of time and date	■		
8. Operation panel			
Buttons illuminated, depending on mode of operation	Pause, Feed, Cancel, Menu, Enter, 4 x Cursor		
LCD graphic display Width x Height in mm	60 x 40		
lines/characters	4 / about 20		
9. Interfaces			
Parallel Centronics bi-directional acc. IEEE 1284	□		
Serial RS 232 C 1.200 up to 230.400 Baud/8 Bit	■		
USB 2.0 High Speed Slave for PC-connection	■		
Ethernet 10/100 Base T, LPD, RawIP-Printing, ftp-Printing, DHCP, HTTP, FTP, SMTP, SNMP, NTP, Zeroconf, mDNS	■		
WLAN card 802.11b/g	□		
USB Master for keyboard and scanner and other	2x ■		

■ Standard □ Option

[1]Depending on label size, material and adhesive some limitations are possible. Critical material or applications have to be testet and cleared.

10. Monitoring	
Stop printing if	End of ribbon End of labels Printhead open

11. Settings	
	Country and language settings AT, BE, BG, CH, CN, CZ, DE, DK, ES, EE, FR, FI, GB, GR, HU, HR, IR, IT, JP, KR, LT, LV, MK, MX, NO, NL, PT, PL, RU, SE, SI, RS, TR, US, ZA system settings, print parameters, interfaces, security

12. Test routines	
	System diagnosis of memory and print head when switched on, Short Status, Status Print, font list, device list, profile of print head, profile of label, test grid, monitor mode.
Status reports	Extensive status print with information about instrument setting, for example print length counter, runtime counter etc. Request of the machine status via software command. Detailed status messages on the display, for example network error-no link, barcode error etc.

13. Fonts	
Font types	5 Bitmap fonts incl. OCR-A, OCR-B and 3 Vector fonts Swiss 721, Swiss 721 Bold and Monospace 821, loadable TrueType fonts. Optional chinese (simplified chinese)
Character sets	Windows 1250 up to 1257, DOS 437, 737, 775, 850, 852, 857, 862, 864, 866, 869, EBCDIC 500, ISO 8859-1 up to -10 and -13 up to -16, WinOEM 720, UTF-8, Macintosh Roman, DEC MCS, K0l8-R. All West and East European latin, cyrillic, greek, hebrew and arabic characters are supported.
Bitmap fonts	Size of width and height 1 - 3 mm zoom 2 - 10 Orientation 0°, 90°, 180°, 270°
Vector-/TrueType fonts	Size of width and height 0.9 - 128 mm variable zoom, Orientation 360° in steps of 1°,
Font formats	Bold, italic, underlined, outline, negative, grey, vertical, depending on character fonts
Font width	Variable

14. Graphics	
Graphic elements	Line, arrow, box, circle, ellipse, filled and filled with fading
Graphic formats	PCX, IMG, BMP, TIF, MAC, GIF, PNG

15. Codes		
Linear Barcodes	Code 39, Code 93 Code 39 Full ASCII Code 128 A, B, C Codabar EAN 8, 13 EAN/UCC 128 EAN/UPC Appendix 2 EAN/UPC Appendix 5 FIM HIBC	Interleaved 2/5 Ident- and lead code of german Post AG JAN 8, 13 MSI Plessey Postnet RSS 14 UPC A, E, E0
2D-Codes	Aztec, Codablock F, Data Matrix, PDF 417, Micro PDF 417, UPS Maxicode, QR-Code, RSS 14 truncated, limited, stacked and stacked omnidirectional, EAN-Datamatrix, GS1 Data Bar	
	All codes variable in height, module width and ratio. Orientation 0°, 90°, 180°, 270°. Optionally with check digit, printed characters and Start/Stop code, depending on code type.	

16. Software		
Programming	J-Script direct programming	■
	abc-Basic Compiler	■
	Database Connector	□
System diagnosis/ Administration	Printer monitoring	■
	Network Manager	□
cab Label software	cablabel R2 Lite	■
	cablabel R2 Pro	□
More Label software	Easylabel, Codesoft, Nicelabel, Bartender, Label Matrix, Labelview	□
Windows driver	2000, XP32/64 bit, 2003 32/64 bit, Vista 32/64 bit	■
Mac driver	OS X printer driver from version 10.3	■
Linux driver	Testet with Suse 9.0, CUPS based	■

17. Operation data by	
Power supply	**100 - 240 V** ~ 50/60 Hz, PFC
Energy consumption	max. 300 W
Operation temperat.	10 - 35°C
Humidity	30 - 85% not condensing
Approvals	CE, FCC class A, CB, CCC

Power supply	**24 VDC** ~ 50/60 Hz, PFC
Energy consumption	max. 250 W
Operation temperat.	10 - 35°C
Humidity	30 - 85% not condensing
Approvals	CE, others on request

■ Standard □ Option

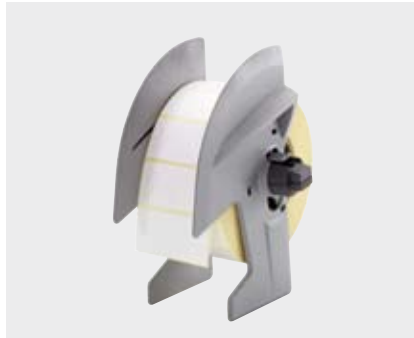The specifications are according to our current technical knowledge. They are subject to change.

Accessories

External re-winder ER4

Media hub

Ribbon holder

1 Roll diameter: max. 210 mm
2 Operating voltage: 100 - 240 V ~
3 Core diameter mm: 40 / 76

For a quick replacement labels and ribbons can be provided in additional holders.

Removable battery 4 VDC/7.2 A

Recharger 24 V

Connecting cable

Connecting plug

Operating voltage:
24 VDC / 7.2 Ah
L x W x H mm: 380 x 185 x 90
Weight: 5.5 kg

Operating voltage:
100-240 V ~
Charging rate: max. 2 A
Charging time: 6 - 8 h
when completely recharged

Length: 1.5 m
Additional lengths
on request

For self cable fabrication
Powercon NAC3FCA

Memory card

Numerical keyboard

Compact keyboard

Standard keyboard

CompactFlash Typ I up to 2 GB
Label formats, fonts, texts
and graphics can be saved.
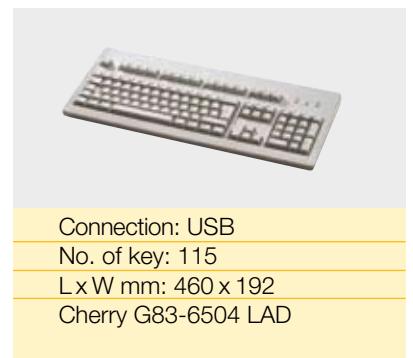It can be accessed from the
printer or from the PC.

Connection: USB
No. of key: 19
L x W mm: 120 x 76

Connection: USB
No. of key: 86
L x W mm: 282 x 132
Cherry Classic Line
G84-4100 LCM

Connection: USB
No. of key: 115
L x W mm: 460 x 192
Cherry G83-6504 LAD

On this account the operation and the compliance with CE-standards is only warranted by using cab-made materials or materials recommended by cab.

Printer Control

Direct programming with J-Script

J	**Job Start**
H 100	**Speed (100 mm/s)**
O R	**Orientation rotated by 180°**
S l1;0,0,68,70,100	**Size of label (100x68 mm, gap 2 mm)**
T 10,10,0,5,pt20;sample	**Text object/font: Swiss bold, 20 pt**
B 10,20,0,EAN-13,SC2;401234512345	**Barcode EAN 13, size SC 2**
G 8,3.5,0;R:30,9,0.3,0.3	**Graphic, box 30 x 9 mm,**
	Line strength 0.3 mm
A 1	**Number of labels (in this example 1)**

The printer language is easy to understand and integrate into your host system. Linkage of variable data with host application. Label design, graphics and fonts are recorded on the compact flash card. The host computer sends only the variable data to the printer.
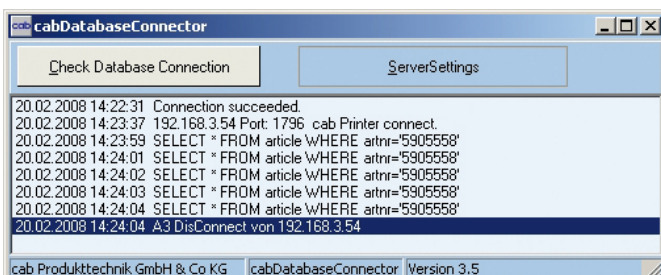
abc - Basic Compiler


```
<ABC>
DO
 LINE INPUT a$
 IF LEFT$(a$,15)="194300301480070" THEN
  PRINT "R t2;",MID$(a$,16)
 ENDIF
 IF LEFT$(a$,15)="194300300580172" THEN
  PRINT "R t3;',MID$(a$,16)
 ENDIF
</ABC>
```

As an integrated element of the firmware it enables the printer to process data via BASIC programming before being transmitted to print editing. Thereby external printer languages can be replaced or data from other systems, e.g. SPS, can be transferred to be printed on different label sizes.

Database Connector

The database connector enables stand-alone printers to link up data from a SQL-compatible database and to print. Data can be rewritten and modified simultaneously to the printing process.

Monitoring
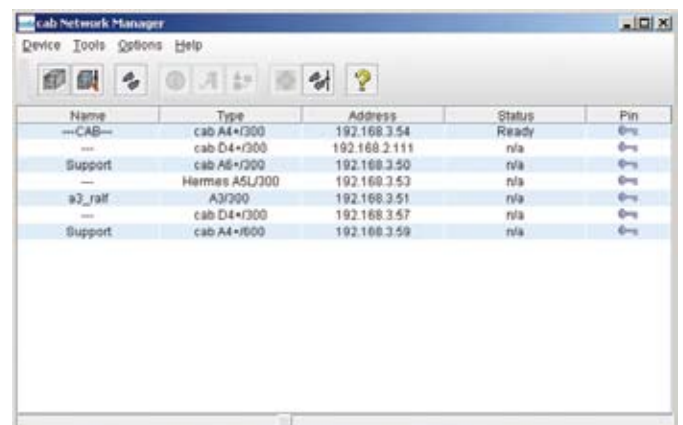
Printer monitoring with Intra- and Internet

The integrated HTTP- and FTP-Server enables, with standard programs like web browser or FTP-clients, the print monitoring, configuration, the firmware-update and the administration of the memory card. Status signals, warning or error signals are sent to users or administrators either as email or SNMP-datagram via SNMP- and SMTP-clients.

Administration

Network Manager

The cab network manager enables the user to govern several printers within the network at the same time. It supports monitoring, configuration, firmware updates, memory card, datasynchronization and PIN-administration centrally.

Windows driver

Create and print your label with a Windows program for ex. MS Word, Excel, Access, Works, Corel Draw etc.

Windows printer driver are provided for 2000, XP 32/64 bit, 2003 32/64 bit, Vista 32/64 bit.
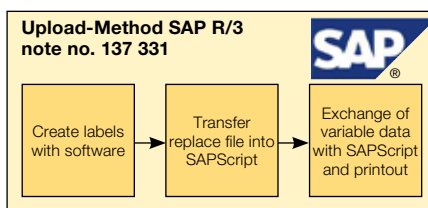
Mac OS X-Treiber

For MAC OS X cab offers a CUPS based printer driver.

Linux-Treiber

For LINUX cab offers also a CUPS based printer driver.

Integration into SAP R/3

cab developed together with SAP the "replacefile" application. This is a simple way to run cab printers with SAPScript out of SAP R/3.

The software to create labels

Perfect labels need optimized text fonts. cab offers a large number of bitmap and vector fonts. Height and width of the font can be scaled and the object can be positioned and arranged. Additional true type fonts can be downloaded to the memory card. Most of the country specific codepages are supported.

● cablabel R2 Lite

Extensive standard label software. You get it - free of charge - with every cab printer.

● cablabel R2 Pro

Allows the embedding of data from different data bases into the label. An assistant supports the creation of UCC/EAN 128 barcodes.

Whether simple texts, barcodes, graphics and the connection of databases, cablabel R2 is the most flexible - offering 24 languages.

MDI (Multiple Document Interface) helps to open and handle several labels at the same time. Objects can be copied, moved and inserted into another label.

cablabel R2 provides its own drivers with greater response to all different functions of cab printers.

Take advantage of using the multiple possibilties of cablabel R2.

Additional label Software
The transfer printers and print and apply systems can be easily controlled with Codesoft, Bartender or NiceLabel.

cablabel R2	Lite	Pro
32-Bit Platform-compatibility Windows 2000 SP4, XP Professionnel SP2 Server 2003 SP2 and Vista 32 bit	■	■
Country and language settings AT, BE, BG, CH, CN, CZ, DE, DK, ES, EE, FR, FI, GB, GR, HU, HR, IT, IL, JP, KR, LT, LV, MK, MX, NO, NL, PT, PL, RU, SE, SI, RS, TR, US, ZA	■	■
Label samples	■	■
Online document. with tutorials	■	■
Multi-level Undo	■	■
number of levels	1	40
Graphic format import	■	■
Color support	■	■
Color graphic reduction		■
Text art		■
TrueType font	■	■
Graphic barcodes	■	■
numbers	9	37
Native printer barcodes	■	■
Hidden (not printable) objects		■
Label preview	■	■
Graphics preview	■	■
Grid view/print		■
OLE-Client		■
Windows driver support		■
Control of printers	1	99
Support of net printer (TCP/IP)	■	■
Bi-directional communication to the printer		■
Stand-alone		
Printing to file	■	■
Font Downloader	■	■
Database		
Database Manager Access, DBF		■
ASCII, ODBC, OLEDB		■
Variables		
Flexible date and time stamping	■	■
Host of date and time with Date offset		■
Printing counter	■	■
Host counter		■
Variable graphic images		■
Free variables		■
Global files		■
Decimal value formating		■
Basic formula		■
User input field		
Text alignment		■
Definition input format		■
Minimum input length		■
Selection of default values		■
Automatic input prompt		■
Extras		
UCC/EAN 128 and Maxicode Assistent		■

Transfer printer

	with tear off plate
5541082	Transfer printer MACH4/200B
5541083	Transfer printer MACH4/300B
5541086	Transfer printer MACH4/600B
	with tear off plate
	and dispense function
5541092	Transfer printer MACH4/200P
5541093	Transfer printer MACH4/300P
5541096	Transfer printer MACH4/600P
	with tear off plate
	and cutter
5541102	Transfer printer MACH4/200C
5541103	Transfer printer MACH4/300C
5541106	Transfer printer MACH4/600C
554xxxx.600	Transfer printer MACH4/**xxxx**-24V
5541xxx.102	Transfer printer MACH4/**xxxx** with RFID read-write unit 13.56 MHz

Content of delivery: Transfer printer, power supply, operation manual, Windows driver, cablabel R2 Lite, Service manual on CD-ROM

Spare parts

5541074.001	Printhead 4/203
5541073.001	Printhead 4/300
5541077.001	Printhead 4/600
5540896.001	Driver roller DR4

Interfaces

5561041	WLAN-Card 802.11 b/g
5954200	Parallel Centronics Interface
5550818	Connecting cable RS232 C 9/9-pole, length 3 m
5901616	Connecting cable USB length 3 m

Accessories

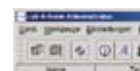|	
5540750	External re-winder ER4/210
5540867.001	Media hub
5540866.001	Ribbon holder
5541219	Removable battery 24 VDC / 7.2 A
5541221	Recharger 24 V
5541222	Connecting cable 24 V length 1.5 m
5917904	Connecting plug
5561043	Memory card CompactFlash Type 1
5917909	Numerical PC keyboard USB
on request	Compact PC keyboard USB Cherry Classic Line G84-4100LCM
on request	Standard PC keyboard USB Cherry G83-6504 LAD

Software

5580212	Database Connector
5580215	Network Manager
5580220	Label software cablabel R2 Lite
5580221	Label software cablabel R2 Pro
9008486	Programming manual

Product marking

The cab delivery programme

cab

Transfer printer MACH4

Transfer printer A+ Series

Print and Apply Hermes A

Print engine PX-Series

Transfer printer e4

Inkjet Colour Printer LX 810

Labels / Ribbons

Label software

Label dispenser HS150

Scanner and MDE

Laser Marking System FL-Series

Safety housing with Accessories

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cab Produkttechnik
GmbH & Co KG

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